SLAC NATIONAL ACCELERATOR LABORATORY

2575 Sand Hill Road, Menlo Park, California 94025
Operated by Stanford University for the U.S. Department of Energy

Vacuum Technology Department Head
Location: Menlo Park, CA (HQ)
Job Requisition # 1585

Description:
SLAC National Accelerator Laboratory seeks a Vacuum Technology Department Head for the Accelerator Directorate. The Department Head will be responsible for managing and leading accelerator facilities within the mission of the Accelerator Directorate. The efficient and reliable operation of the accelerator facilities depends upon maintaining clean, particle-free, UHV conditions, sometimes under high radiation loads and high-field conditions, including a particle-free cryogenic environment. The Vacuum Technology Department supports development and maintenance of effective vacuum systems for the Accelerator Directorate facilities and projects, and serves as a resource of expertise for support-of and collaboration-with other SLAC divisions. This department combines expertise in current UHV technology with research capabilities in the fundamental disciplines that support that technology, namely material science and surface physics. This position reports to the Mechanical Engineering and Technical Support Division (METSD) Director in the Accelerator Directorate of SLAC.
Specific responsibilities include, but are not limited to the following:
• Lead the projects and activities of the Vacuum Science Department and manage department resources. Lead and manage approximately 3 Technical staff.
• Direct the growth of the department, both in determining staff requirements and determining essential facilities and instrumentation required.
• Combine expertise in current UHV technology with research capabilities in the fundamental disciplines that support that technology, namely material science and surface physics. Challenges relevant to accelerator systems include, for example, maintaining integrity of x-ray mirror surfaces and maintaining integrity of cathode surfaces in high-field RF photocathode electron guns.
• Develop and advance facilities for metallography and microscopy, as well as UHV surface analysis technology.
• Develop and implement vacuum policies, procedures, and training for use in accelerator systems.
• Evaluate and recommend appropriate vacuum equipment.
• Advise engineering and technical staff on practices for design, fabrication, build, maintenance of UHV systems.
• Develop practices and procedures for design, fabrication, build, maintenance of UHV systems in particle-free cryogenic environments.

Qualifications:
• An advanced degree in Physics, Engineering, or related field.
• Extensive relevant experience (10+ years) in design, fabrication, processing, and installation of UHV accelerator or accelerator-like vacuum systems.
• Formal training in material science and UHV surface physics technology and instrumentation.
• Strong technical background and extensive knowledge in the field of ultra-high vacuum theory, practice and equipment including clean room procedures and techniques, thin-film coating, leak detectors, residual gas analyzers, vacuum pumps and vacuum gauges, vacuum practices and procedures as applied in particle-free cryogenic environments.
• Demonstrated leadership ability; including administrative and management experience and the ability to manage resources for the department and a wide variety of diverse projects.
• Excellent communication skills, both written and oral.
• Meticulous recording and documentation skills.

Desired Skills:
• Experience in the design and operation of vacuum ultraviolet and x-ray mirror reflection optics.

If interested in applying, please go to:
https://ch.tbe.taleo.net/CH12/ats/careers/requisition.jsp?org=SLAC&cws=1&rid=1585